

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007762**Date Inspected:** 16-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** Steve Barnett**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Hinge-K Components**Summary of Items Observed:**

Summary of Items Observed: On this date, Caltrans Quality Assurance Inspector (QA) Clete Henke was present at Oregon Iron Works, Inc. (OIW) in Clackamas, OR for observation of fabrication of the Hinge K Pipe Beams and related activities including in process welding and OIW Quality Control (QC) visual and nondestructive testing. The following observations were recorded:

OIW Fabrication Shop-Bay 3

Hinge-K Pipe Beam Fuse Assembly 120A-7:

a124-5 to a124-15

120A-7 was idle pending expiration of 72 hour cool down period and subsequent QC NDT.

Hinge-K Pipe Beam Fuse Assembly 120A-3:

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-5:

a124-14 to a124-2

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-6:

A124-9 to a124-1

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

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Hinge-K Pipe Beam Fuse Sub-Assembly 120A-8:

a125 stiffener ring to a124-8 Fuse

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-1:

a111-1 forging to a110-4 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-4:

a111-4 forging to a110-4 base plate

The QA Inspector intermittently monitored OIW welder Bui Liem (WID B10) during in progress Submerged Arc Welding (SAW) at weld joints W1-91 & W1-113. The referenced connections join a106 & a107 stiffeners (W1-91) and a107 & a106 stiffeners (W1-113). The QA Inspector observed as OIW QC Inspector Steve Barnett performed Magnetic particle Testing (MT) and Visual Inspection (VT) of ground tack welds and subsequently the completed root passes at welds referenced above. This testing was performed for informational purposes at the behest of OIW quality control management. Mr. Barnett stated that he had located no rejectable indications. The QA Inspector intermittently observed as welder B10 continued to deposit SAW fill and cover passes in the horizontal (2F) position in accordance with approved welding procedure 4020. The QA Inspector noted the OIW welders were maintaining continuous preheat utilizing a torch. The referenced connections were completed during the shift. The QA Inspector observed OIW QC Inspector Barnett regularly monitoring and recording the in process SAW parameters. The QA Inspector also intermittently observed in process welding parameters and determined that the SAW parameters and minimum preheat/interpass temperature appeared to be in general compliance with the contract requirements -- (W1-91: 35 volts, 585 amperes, 432mm/min travel speed).

OIW Fabrication Shop-Bay 6

Hinge-K Pipe Beam Fuse Assembly 120A-1:

a124-6 to a124-7

The QA Inspector intermittently observed OIW qualified welder Vincent Vu (WID V7) during in-process welding of Soudotape 309L stainless steel overlay to hinge k pipe beam fuse sub-assembly 120A-1. The weld joint is identified as 309L 1st layer. Mr. Vu was observed welding in the flat position utilizing automatic electro slag welding (ESW) overlay process with a .5mm x 60mm Soudotape 309L stainless electrode, filler metal brand Soudotape class EQ309L automatic. An OIW helper was observed assisting welder V7 during ESW activity. The QA Inspector observed OIW QC Inspector Steve Barnett regularly monitoring and recording the in process ESW parameters. The QA Inspector also intermittently observed in process welding parameters and determined that the ESW parameters (1200 amps, 26 volts, 229mm/min travel speed) and minimum preheat temperature of 225° F appeared to be in general compliance with the contract requirements and approved OIW Welding Procedure Specification (WPS) 7003.

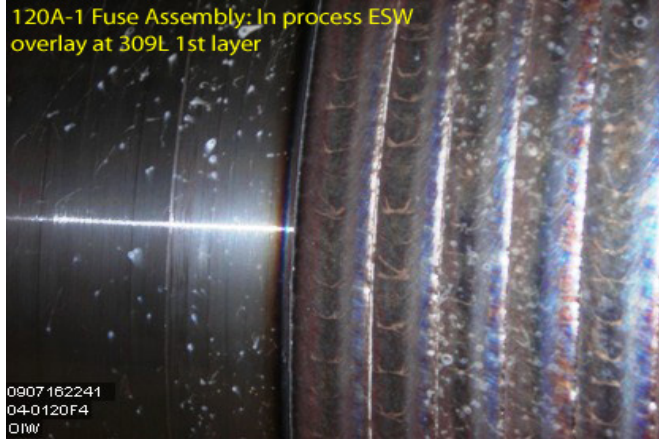
Material, Equipment, and Labor Tracking:

The QA Inspector performed verification of personnel involved with this project and equipment in use. The QA Inspector accounted for 3 OIW production personnel and 1 Quality Control Inspector present on this date.

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120A-1 Fuse Assembly: In process ESW
overlay at 309L 1st layer



0907162241
04-0120F4
QINW

Base Assembly 102A-4:
Typical completed 25mm
fillet connection



0907162234
04-0120F4
QINW

Summary of Conversations:

As noted in the body of the report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677 , who represents the Office of Structural Materials for your project.

Inspected By: Henke,Clete

Quality Assurance Inspector

Reviewed By: Adame,Joe

QA Reviewer